

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 22 February 2010 has been entered.
2. The examiner acknowledges applicant's amendments to claims 1 and 3-10, and the cancellation of claim 2.

Claim Objections

3. **Claim 1 is objected to** because of the following informalities: Line 3, it is suggested that the phrase "one operating lever" be changed to "an operating lever," and in line 7, the phrase "of the drive disk" should be inserted after the phrase "angle of rotation" for clarification. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. **Claims 1 and 3-10 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. **In regards to claim 1**, it is unclear what applicant intends to claim with the limitation "one operating lever for the locking mechanism," i.e. one operating

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lever for accomplishing what task in relation so the locking mechanism. It is clear that the locking lever is for operating the locking mechanism or cooperating with the locking mechanism. Furthermore, it is unclear how the motor drive opens the locking mechanism by acting upon the locking mechanism solely via contact of the cam with the operating lever resulting from the driving of the drive disk in the actuation and reverse directions, when it is clear from the specification that the opening of the locking mechanism only occurs in the actuation direction and not the reversing direction, in which some of the components of the device, such as the motor drive, are brought back into their original position before the actuation of the motor to turn in the actuation direction. For examination purposes, the claim will be given a broad interpretation until further clarification from applicant.

7. **In regards to claim 3**, line 2, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

8. **In regards to claim 9**, it is unclear how the pawl is released by the operating lever when the motor drive is acted upon in the reverse direction, when it is clear that the pawl is only released to open the locking mechanism when the electric motor turns in the actuation direction. For examination purposes, the claim will be examined as best understood until further clarification from applicant.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1 and 3-10 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Nass et al. (WO 03/018939) in view of Jahrsetz et al. (US-5802894).

11. Within the rejections below, the Paragraph numbers referred to in regards to Nass et al. are drawn from the machine translation of the Nass et al. reference included with a previous Office Action mailed to applicant on 30 May 2007.

12. **In regards to claim 1**, Nass et al. discloses a vehicle door latch (Figure 1) having a locking mechanism 1, 2, an operating lever 3 for cooperating with the locking mechanism (Figure 1), and a motor drive 5, 6, 7, 8, 9 containing a drive disk 7 with a front-sided cam 9 for causing a reciprocating motion of the operating lever (apparent from Figures 1-4), with the cam having an irregular-shaped wheel (portion at reference character 9, Figure 1) and an end portion (portion having axis 10, Figure 1) located about a cam rotational axis 10 coincident with a drive disk rotational axis (apparent from Figure 1), a rear-sided element 12 (rear sided with respect to locking mechanism component 1, Figure 1) limiting the angle of rotation (apparent from Figures 1-3), and an electric motor 5 capable of turning in an actuation direction (apparent from Figure 1) and may

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be allowed to turn in a reverse direction (Paragraph 17, lines 3 and 4) for directly driving a corresponding rotation of the drive disk in an actuation direction (direction shown in Figure 1) with the drive disk being driven in a reverse direction by the element limiting the angle of rotation to return the drive disk to a starting position (apparent from Paragraph 17), with the rotation being limited by the element limiting the angle of rotation (apparent from Figures 1-3), wherein the motor drive opens the locking mechanism by directly acting upon the locking mechanism solely via contact of the cam with the operating lever resulting from the driving of the drive disk in the actuation direction (apparent from Figures 1-4).

Nass et al. fails to specifically disclose that the electric motor turns in a reverse direction to drive the drive disk in a reverse direction. Jahrsetz et al. teaches a vehicle door latch (Figure 1) including a locking mechanism 7, an operating lever 8 for cooperating with the locking mechanism (apparent from figure 1), and a motor drive 11, 12, 13 containing a drive disk 13 with a front sided cam 11 for causing reciprocating motion of the operating lever (Col. 7, line 58 - Col. 8, line 4), the cam has an irregular-shaped wheel and an end portion located about a cam rotational axis coincident with a drive disk rotational axis (apparent from Figure 1), and an electric motor 13 capable of turning in both an actuation direction and a reverse direction (Col. 7, line 58 - Col. 8, line 15) for directly driving a corresponding rotation of the drive disk in an actuation direction 13a and in a reverse direction (Col. 8, lines 3-15). Since specifying that the electric motor disclosed by Nass et al. turns in a reverse direction to drive the rotation of the drive disk in a reverse direction would not hinder the ability of the electric

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motor to drive the drive disk in its actuation direction to open the locking mechanism, it would have been obvious to one of ordinary skill in the art at the time the invention was made to specify that the electric motor also turns in a reverse direction, as taught by Jahrsetz et al. of an electric motor that can turn in an actuation direction and a reverse direction, in order to simplify the device, to lessen the wear on components to allow the motor to turn in the reverse direction when the drive disk is rotated in the reverse direction, and to ensure and aid the drive disk into its starting position, as disclosed by Nass et al. in Paragraph 17.

13. **In regards to claim 3**, Nass et al. in view of Jahrsetz et al. teaches that the element limiting the angle of rotation cooperates with a stationary stop 13, 14 (stationary on portion 7), preferably fixed to a latch housing (apparent that the door latch device would be housed in a housing, Figures 1-4), and limits the movement of the rotation of the drive disk to the actuation and reverse directions (spring limits movement, Figures 1-3).

14. **In regards to claims 4 and 5**, Nass et al. discloses that the operating lever contains at least two arms, specifically three, an operating arm (arm portion near reference character 3a, Figure 1), an actuation arm (arm portion near reference character 2, Figure 1), and an additional opening arm (arm portion near reference character 4, Figure 1).

15. **In regards to claim 6**, Nass et al. discloses that the operating arm is acted upon by the drive (Figure 1) while the actuation arm acts upon the locking mechanism (engagement with pawl 2).

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16. **In regards to claim 7**, Nass et al. discloses that the motor drive acts upon the operating lever in its actuating direction (direction of disk and arm shown in Figure 3) for opening the locking mechanism until the element limiting the angle of rotation rests against the stop in an opening position (position of element in Figure 3).

17. **In regards to claim 8**, Nass et al. discloses that door latch is capable of maintaining the opening position (open until spring reverses movement of operating lever, Figures 3 and 4) until the locking mechanism has been reliably opened.

18. **In regards to claim 9**, Nass et al. discloses that the operating lever pivotally engages the pawl of the locking mechanism to open the locking mechanism and the motor drive is acted upon in the actuation direction until the pawl, held previously by the operating lever, is released (apparent from Figures 1-4).

19. **In regards to claim 10**, Nass et al. discloses that in an opening position (Figure 3) of the drive disk, a counterforce generated by a spring 16 on the operating lever, runs radially through the cam in the direction of a rotation axis (axis at reference character 10, Figure 1) of the drive disk without providing a lateral force running in the actuation direction or in the reverse direction of the drive disk (apparent since spring 16 is located at a pivot point of the at least one operating lever, offset from the axis of the drive disk, Figure 1), wherein the counterforce generated by the spring causes a frictional force on a generally flat surface (surface at reference character 11, Figure 3) of the cam to engage the

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operating lever to set and maintain the opening position of the drive disk (apparent from the position shown in shadow in Figure 3, the generally flat surface is capable of holding the operating lever in the opening position until the cam is moved to the position shown in Figure 4).

20. **Claims 1, 3-6, and 9 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Jahrsetz et al. (US-5802894) in view of Szablewski (US-6435573).

21. **In regards to claim 1**, Jahrsetz et al. discloses a vehicle door latch (Figure 1) having a locking mechanism 7, (apparent striker cooperating with pawl 7), an operating lever 8 for cooperating with the locking mechanism (Figure 1), and a motor drive 11, 12, 13 containing a drive disk 13 with a front-sided cam 11 for causing a reciprocating motion of the operating lever (Col. 7, line 58 - Col. 8, line 4), with the cam having an irregular-shaped wheel (apparent from Figure 1) and an end portion (portion with component 13b, Figure 1) located about a cam rotational axis coincident with a drive disk rotational axis (apparent axis through component 13b, Figure 1), and an electric motor 13 capable of turning in both an actuation direction and a reverse direction (Col. 7, line 58 - Col. 8, line 15) for directly driving a corresponding rotation of the drive disk in an actuation direction and in a reverse direction (Col. 8, lines 3-15), wherein the motor drive opens the locking mechanism by directly acting upon the locking mechanism solely via contact of the cam with the operating lever resulting from the driving of the drive disk in the actuation direction (Col. 7, line 58 - Col. 8, line 15). Jahrsetz et al. fails to disclose that the drive disk includes a rear-sided element limiting the

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angle of rotation of the drive disk in the actuation and reverse directions.

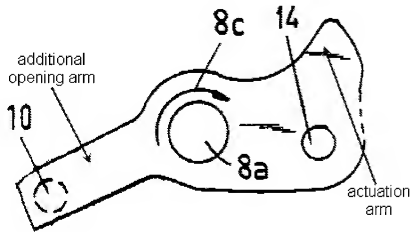
Szablewski teaches a vehicle door latch (Figure 1) including a locking mechanism 20, and a motor drive 50, 52, 53 containing a drive disk 53 having a rear-sided element 59 limiting the angle of rotation of the drive disk, and an electric motor 50 capable of turning in both an actuation direction 56 and a reverse direction 56' for directly driving a corresponding rotation of the drive disk in an actuation direction and in a reverse direction (apparent from Figures 2-9), with the rotations being limited by the element limiting the angle of rotation (apparent from Figures 6 and 9). Since the inclusion of an element limiting the angle of rotation would not hinder the ability of the electric motor to turn the drive disk, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an element limiting the angle of rotation of the drive disk to control the rotation of the drive disk, ensure that its desired operational movement when it is rotated by the electric motor, and to allow the position of the drive disk to be determined by a control device associated with the operation of the latch.

22. **In regards to claim 3**, Szablewski teaches that the element limiting the angle of rotation cooperates with a stationary stop 38, 58, preferably fixed to a latch housing (apparent from Figure 1), and limits the movements of rotation of the drive disk to the actuation and reverse directions (apparent from Figures 6 and 9).

23. **In regards to claims 4 and 5**, Jahrsetz et al. discloses that the operating lever contains at least two arms, specifically three, an operating arm 10, an

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actuation arm (see portion of Figure 1 below), and an additional opening arm (see portion of Figure 1 below).



24. In regards to claim 6, Jahrsetz et al. discloses that the operating arm is acted upon by the drive, whilst the actuation arm acts upon the locking mechanism (apparent from Figure 1).

25. In regards to claim 9, Jahrsetz et al. discloses that the operating lever pivotally engages a pawl 7 of the locking mechanism to open the locking mechanism and then the motor drive is acted upon in the actuation direction until the pawl, held previously by the operating lever, is released (Col. 7, line 58 - Col. 8, line 15).

Response to Arguments

26. Applicant's arguments with respect to claims 1 and 3-10 have been considered but are moot in view of the new ground(s) of rejection.

27. The examiner appreciates applicant's amendments to the claims, and therefore, the drawing objection set forth in the previous office action is withdrawn.

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28. The examiner appreciates applicant's amendments to claims 1 and 3, and therefore, the claim objections set forth in the previous office action are withdrawn.

29. The examiner appreciates applicant's amendments to claim 10, and therefore, the rejection of claim 10 under 35 U.S.C. 112, second paragraph, set forth in the previous office action is withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALYSON M. MERLINO whose telephone number is (571)272-2219. The examiner can normally be reached on Monday through Friday, 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on (571) 272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

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Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter M. Cuomo/
Supervisory Patent Examiner, Art Unit 3673

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